

To the knowledge of the bees of the genus *Andrena* Fabricius, 1775 (Hymenoptera, Andrenidae) of the European part of Russia

К познанию пчел рода *Andrena* Fabricius, 1775 (Hymenoptera, Andrenidae) европейской части России

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Ключевые слова: Apoidea, фауна, Центральная Россия, Черноземье, новые находки.

Abstract. A review of the bee genus *Andrena* Fabricius, 1775 in the Central Chernozem Region of Russia (Kursk, Lipetsk, Tambov, and Voronezh provinces) is presented, based on 2,216 examined specimens. A total of 72 species were recorded, including *Andrena fallax* Eversmann, 1852 and *A. fulvicornis* Schenck, 1853, which are new to the Russian fauna; *A. pallitarsis* Pérez, 1903, which is new to the fauna of European Russia; and eight species which are new to central European Russia. The regional fauna now comprises 90 species. Lipetsk Province is the most extensively studied area (with 75 species recorded), while Kursk and Tambov provinces are the least explored (with 41 and 19 species, respectively).

Резюме. Представлен обзор пчел рода *Andrena* Fabricius, 1775 в Центрально-Черноземном регионе России (Курская, Липецкая, Тамбовская и Воронежская области), основанный на изучении 2216 экземпляров. Всего отмечено 72 вида, из которых *Andrena fallax* Eversmann, 1852 и *A. fulvicornis* Schenck, 1853 впервые указываются для фауны России; *A. pallitarsis* Pérez, 1903 — впервые для европейской части России, а восемь видов — впервые для центра европейской части России. В настоящее время фауна региона насчитывает 90 видов. Наиболее полно изучена Липецкая область (75 видов), тогда как Курская и Тамбовская области остаются наименее исследованными — 41 и 19 видов соответственно.

Introduction

The genus *Andrena* Fabricius, 1775 is one of the largest bee genera in the world, comprising over 1,600 described species [Ascher, Pickering, 2026]. Species of this genus play a key role as pollinators of wild and cultivated plants, including earlyspring ephemerals, crucifers (Brassicaceae), legumes (Fabaceae) and asterids (Asteraceae). However, the taxonomy of the group is complex, with many species difficult to identify based on morphological characteristics [Praz et al., 2022], and their distribution across Russia remains poorly understood.

The Central Chernozem Region, which covers the Voronezh, Lipetsk, Kursk and Belgorod provinces, as well as parts of the Tambov and Volgograd provinces, is characterised by a diverse landscape. The area is home to broad-leaved forests, forest-steppe and feather-grass steppes, as well as chalk outcrops. These features create the conditions necessary for the development of a diverse and ecologically varied *Andrena* fauna. However, until recently, data on the species composition and distribution of this bee genus in the region remained scattered.

The most complete information has been obtained for Lipetsk Province thanks to V.T. Kuznetsova's long-term research. In her monograph "Bees of Lipetsk Province: Cadastre" [Kuznetsova, 2009], she reported 73 species of *Andrena*, indicating the precise location of each one. Previously, Kuznetsova [1970] published a list of insect pollinators of the Galichya Gora Reserve, in which she first recorded *A. alfkenella*, *A. dorsata* (as *A. propinqua* Schenck, 1853) and *A. flavipes* in the region. In subsequent works [Kuznetsova, 1974, 1977, 1990, 2000], she gradually supplemented the faunistic list to include species that were new to the centre of European Russia. Consequently, Lipetsk Province is currently the only area in the Central Chernozem Region for which a comprehensive *Andrena* bee cadastre is available.

Compared to Lipetsk Province, Voronezh Province has been studied less extensively. The most significant contribution was made by Dobrynin [1997] in his dissertation, "Fauna of alfalfa pollinators in the Central Chernozem zone", in which he recorded 26 species in Voronezh Province. Prior to this, Bodrenkov [1964] had reported nine species. While studying alfalfa pollinators, Zavgorodnyaya [1952, 1953] recorded *Andrena afzeliella* (as *A. albofasciata* Thomson, 1870 and *A. ovatula* Kirby, 1802), *A. chrysopyga*, *A. flavipes*, *A. labialis*, *A. thoracica* and *A. wilkella*. N.G. Shaposhnikova [1974] reported *Andrena albopunctata* and *A. flavipes* on sunflowers in Voronezh Province while conducting research on pollinators of agricultural fields. Other authors have made isolated records: Konakov and Pisareva [1938]: *Andrena afzeliella* (as *A. ovatula*), *A. chrysopyga*, *A. labialis*; Konakov and Onisimova [1931]: *A. morio*; Barabash-Nikiforov and Skufyin [1953]: *A. afzeliella* (as *A. albofasciata*) and *A. flavipes*; Negrobov [1988]: *A. afzeliella* (as *A. albofasciata*); Antonova [1973; 1976]: *Andrena* sp.; Khitsova and Golub [1985]: *Andrena* sp.; Izmailova [1934]: *Andrena* sp. on *Medicago* sp. (Fabaceae).

Kursk Province remained a "blank spot" for a long time. The first record of the species *Andrena* sp. was made by Grinfeld [1956] while studying alfalfa pollinators. More recent research has been conducted by Ostrovsky and Ivlev [2024, 2026], who have studied the parasitic complex of Stylopidae and their hosts, the wild bees. Based on collections made over several field seasons in many districts of Kursk Province, their research resulted in the publication of eleven species of *Andrena* [Ostrovsky, Ivlev, 2026]. These records significantly expand our understanding of the distribution of southern and steppe species in the region.

Tambov Province is represented in the literature by isolated studies. While studying the pollination of alfalfa and fruit and berry crops, Rymashevsky [1969, 1972; Rymashevsky, Rymashevskaya, 1958] recorded the following species: *Andrena afzeliella* (as *A. albofasciata*), *A. pilipes* (as *A. carbonaria* (Linnaeus, 1767)), *A. cineraria*, *A. flavipes* and *A. thoracica*. Additionally, Ostrovsky and Ivlev [2026] reported *A. falsifica* and *A. afzeliella* (as *A. ovatula*) in Tambov Province.

Material and methodology

This paper is based on a study of 2,216 specimens of *Andrena* collected in Kursk, Lipetsk, Tambov and Voronezh provinces, and stored in the collections of Voronezh State University [VSU], and Zoological Institute RAS, Saint Petersburg [ZISP]. These regions are considered together due to their significant similarity in terms of natural conditions and fauna.

The bees were mostly collected by K.S. Ivlev, A.V. Lopatin and V.T. Kuznetsova, specimens were mainly prepared for study by K.S. Ivlev. All specimens were studied and identified by D.A. Sidorov; however, some belonging to difficult and obscure groups could not be identified with precision at this time and will be published separately. The general taxonomy and distribution of listed species follows Proshchalykin et al. [2017, 2023].

Comprehensive information on all the specimens studied is provided in the form of a Darwin Core standard dataset, which has been uploaded to the Global Biodiversity Information Facility [Sidorov et al., 2026]. The dataset was prepared by D.A. Sidorov with the participation of K.S. Ivlev and A.B. Ruchin. Here, we only provide full data for the most important records that are new to Russia.

The photographs were taken by D.A. Sidorov using a MBS-9 stereomicroscope with a custom photoport HC-2 by Optics SPb and a Koritcam E3ISPM12000KPC digital camera. Multiple images were stacked using Helicon Focus 7.6 software. The final illustrations were assembled and post-processed for contrast and brightness using Adobe® Photoshop® software by M.Yu. Proshchalykin.

The present work is registered in ZooBank (www.zoobank.org) under urn:lsid:zoobank.org:pub:562E935B-7B25-47EB-AB7A-84CD89B3DDE7

List of *Andrena* species newly recorded from Russia

Andrena (Leimelissa) fallax Eversmann, 1852

Figs 1–3.

Material. 2♀♀, Voronezh Province, Divnogorye Nature Reserve, Bolshiye Divy, 28.VI.1992, A.V. Lopatin [VSU, ZISP]; 1♀, ibid., 17.VII.1994, A.V. Lopatin [VSU]; 1♀, Divnogorye Nature Reserve, Chertov Log, 17.VII.1994, A.V. Lopatin [ZISP].

Remark. Eversmann [1852] described this species from "promontoriis Uralensibus australibus", but the only known specimen (the lectotype) lacks a geographical label. This species was also previously unknown in Russia as a junior synonym of *Andrena ispida* Warncke, 1965 [Astafurova et al., 2022]. Therefore, we are publishing the first reliable record of this species in Russia.

Distribution. *Russia (center of the European part); Southern and Eastern Europe, Caucasus, Turkey, Syria, Iran [Kaleli et al., 2022].

Andrena (Notandrena) fulvicornis Schenck, 1853

Figs 4–6.

Material. 1♀, Kursk Province, Central Chernozem Nature Reserve, village Zapovedny, 12.VIII.2022, K.S. Ivlev [ZISP]; 1♀, Kursk Province, Gorshechensky district, Belgoro-

dka, 18.VIII.2022, K.S. Ivlev [ZISP]; 1♀, Voronezh Province, Nizhnedevitsky district, village Nizhnedevitsk, 22.VII.2024, K.S. Ivlev [ZISP]; 1♀, Voronezh Province, Vorobyovsky district, village Nikolskoye 1st, 31.V.2025, E.V. Aksenenko [ZISP].

Remark. This species is quite similar to *Andrena nitidiuscula*. However, the valid taxonomic status of *A. fulvicornis* has been confirmed through morphological and genetic analysis [Schwenninger, 2013; Wood, 2023].

Distribution. *Russia (center of the European part); Western, Southern and Eastern Europe, Turkey [Schwenninger, 2013; Wood, 2026].

Records of the species in the regions studied

Here, we present new records for 72 species collected in at least one of the provinces studied in the Central Chernozem Region (Table 1). Two species are newly recorded in Russia (*Andrena fallax* and *A. fulvicornis*), one is newly recorded in the European part of Russia (*A. pallitarsis*), eight are newly recorded in the centre of the European part of Russia, and four are newly recorded in the studied provinces as a whole. To date, the provinces under study remain extremely heterogeneous in



Figs 1–6. *Andrena fallax* Eversmann, 1852, female (1–3) and *A. fulvicornis* Schenck, 1853, female (4–6). 1, 4 — habitus, dorsal view; 2, 5 — head, frontal view; 3, 6 — labels.

Рис. 1–6. *Andrena fallax* Eversmann, 1852, самка (1–3) и *A. fulvicornis* Schenck, 1853, самка (4–6). 1, 4 — внешний вид сверху; 2, 5 — голова спереди; 3, 6 — этикетки.

terms of their *Andrena* fauna. This is due to very sparse and uneven collection activities.

Discussion

To date, the *Andrena* fauna in the regions under study comprises 90 species (Table 1). The fauna of each province has expanded significantly: Kursk Province has increased from

3 to 41 species, Tambov Province from 6 to 19 species, and Voronezh Province from 26 to 67 species. Lipetsk Province has been studied most thoroughly — only two very rare species were found in addition to the published data. One of these, *Andrena pallitarsis*, was previously identified by Kuznetsova [2000] as *A. aff. chrysosceles*. However, some of the specimens of *Andrena* that we examined were misidentified by this author, so her collection should be re-examined.

Table 1. The distribution and abundance of *Andrena* species in the regions under study
Таблица 1. Распределение и численность видов рода *Andrena* в исследуемых регионах

Species name	Kursk Province	Lipetsk Province	Tambov Province	Voronezh Province
<i>Andrena (Aenandrena) aeneiventris</i> Morawitz, 1872**	—	—	—	2
<i>A. (Andrena) apicata</i> Smith, 1847	1	+	—	—
<i>A. (A.) batava</i> Pérez, 1902*	—	—	—	5
<i>A. (A.) clarkella</i> (Kirby, 1802)	—	+	—	1
<i>A. (A.) fucata</i> Smith, 1847	—	+ 7	—	1
<i>A. (A.) helvola</i> (Linnaeus, 1758)	—	+ 10	—	5
<i>A. (A.) nycthemera</i> Imhoff, 1868	+	+ 5	—	—
<i>A. (A.) praecox</i> (Scopoli, 1763)	—	+ 12	—	1
<i>A. (A.) varians</i> (Kirby, 1802)	—	+	—	3
<i>A. (Bryandrena) florea</i> Fabricius, 1793*	1	—	—	—
<i>A. (Charitandrena) hattorfiana</i> (Fabricius, 1775)	4	+ 16	3	8
<i>A. (Chlorandrena) humilis</i> Imhoff, 1832	1	+	—	2
<i>A. (Chrysandrena) fulvago</i> (Christ, 1791)	—	+	—	—
<i>A. (Cnemidandrena) denticulata</i> (Kirby, 1802)	22	+ 2	—	—
<i>A. (C.) fuscipes</i> (Kirby, 1802)	—	+	—	—
<i>A. (C.) nigriceps</i> (Kirby, 1802)*	2	—	—	—
<i>A. (C.) similima</i> Smith, 1851	—	+ 10	—	+
<i>A. (C.) tridentata</i> (Kirby, 1802)**	2	—	—	—
<i>A. (Euandrena) bicolor</i> Fabricius, 1775	2	+ 12	4	+ 60
<i>A. (E.) chrysopus</i> Pérez, 1903	—	+	—	—
<i>A. (E.) fulvida</i> Schenck, 1853	—	+	—	1
<i>A. (E.) ruficrus</i> Nylander, 1848*	—	—	—	4
<i>A. (Hamandrena) stepposa</i> Osytsnjuk, 1977	—	+	—	—
<i>A. (Holandrena) labialis</i> (Kirby, 1802)	4	+ 3	—	+ 1
<i>A. (H.) variabilis</i> Smith, 1853**	—	—	—	7
<i>A. (Hoplendrena) rosae</i> Panzer, 1801	6	+ 8	3	12
<i>A. (H.) scotica</i> Perkins, 1916	2	+ 6	—	9
<i>A. (H.) trimmerana</i> (Kirby, 1802)	—	+	—	—
<i>A. (Leimelissa) fallax</i> Eversmann, 1852	—	—	—	4
<i>A. (L.) florivaga</i> Eversmann, 1852	—	+ 1	—	1
<i>A. (L.) paucisquama</i> Noskiewicz, 1924	—	+ 11	—	1
<i>A. (L.) rufizona</i> Imhoff, 1834	—	+ 3	—	2
<i>A. (Leucandrena) argentata</i> Smith, 1844	—	+ 2	27	+ 9
<i>A. (L.) barbilabris</i> (Kirby, 1802)	—	+	—	6
<i>A. (L.) ventralis</i> Imhoff, 1832	—	+ 4	—	1
<i>A. (Margandrena) marginata</i> Fabricius, 1776	—	+	—	9
<i>A. (Melandrena) albopunctata</i> (Rossi, 1792)	—	+	—	+ 1
<i>A. (M.) assimilis</i> Radoszkowski, 1876	—	+ 12	—	+ 13
<i>A. (M.) chrysopyga</i> Schenck, 1853	1	+ 13	—	+ 4

Table 1. (continuations)
Таблица 1. (продолжение)

Species name	Kursk Province	Lipetsk Province	Tambov Province	Voronezh Province
<i>A. (M.) cineraria</i> (Linnaeus, 1758)	6	+ 5	+	+ 11
<i>A. (M.) comta</i> Eversmann, 1852	–	+	–	–
<i>A. (M.) flavipes</i> Panzer, 1799	34	+ 21	+ 5	+ 60
<i>A. (M.) limata</i> Smith, 1853	45	+ 3	–	+ 20
<i>A. (M.) morio</i> Brullé, 1832	–	–	–	+ 4
<i>A. (M.) nigroaenea</i> (Kirby, 1802)**	1	–	–	–
<i>A. (M.) nitida</i> (Müller, 1776)	+ 16	+ 10	–	16
<i>A. (M.) thoracica</i> (Fabricius, 1775)	6	+ 9	+ 1	+ 6
<i>A. (M.) vaga</i> Panzer, 1799	1	+	–	3
<i>A. (Micrandrena) alfenella</i> Perkins, 1914	–	+	–	–
<i>A. (M.) ensinella</i> Stoeckert, 1924	–	+	–	+
<i>A. (M.) falsifica</i> Perkins, 1915	19	+	+	8
<i>A. (M.) floricola</i> Eversmann, 1852	–	+ 121	–	+ 9
<i>A. (M.) minutula</i> (Kirby, 1802)	10	+ 109	54	+ 105
<i>A. (M.) minutuloides</i> Perkins, 1914	31	+ 33	7	77
<i>A. (M.) nanaeformis</i> Noskiewicz, 1925	2	+ 33	–	+ 13
<i>A. (M.) nanula</i> Nylander, 1848	–	+	–	1
<i>A. (M.) niveata</i> Friese, 1887	–	+	–	–
<i>A. (M.) proxima</i> (Kirby, 1802)	+ 2	+ 8	1	1
<i>A. (M.) subopaca</i> Nylander, 1848	3	+ 25	14	16
<i>A. (M.) tringa</i> Warncke, 1973	–	+	–	–
<i>A. (Notandrena) chrysosceles</i> (Kirby, 1802)	2	+	–	+ 3
<i>A. (N.) fulvicornis</i> Schenck, 1853	2	–	–	2
<i>A. (N.) nitidiuscula</i> Schenck, 1853	1	+ 1	1	1
<i>A. (N.) pallitarsis</i> Pérez, 1903***	–	2	–	1
<i>A. (Opandrena) schencki</i> Morawitz, 1866**	2	–	–	–
<i>A. (Orandrena) oralis</i> Morawitz, 1876**	–	–	–	3
<i>A. (Oreomelissa) coitana</i> (Kirby, 1802)	1	+	–	+
<i>A. (Pallandrena) braunsiana</i> Friese, 1887	–	+	–	–
<i>A. (Parandrenella) atrata</i> Friese, 1887	–	+ 2	1	3
<i>A. (Plastandrena) bimaculata</i> (Kirby, 1802)	–	+	–	34
<i>A. (P.) morawitzi</i> Thomson, 1872	–	+	–	–
<i>A. (P.) pilipes</i> Fabricius, 1781	4	+ 6	+	+ 6
<i>A. (P.) tibialis</i> (Kirby, 1802)	1	+ 3	–	+ 5
<i>A. (Poecilandrena) labiata</i> Fabricius, 1781	1	+ 14	–	+ 14
<i>A. (Simandrena) combinata</i> (Christ, 1791)	–	+	–	–
<i>A. (S.) congruens</i> Schmiedeknecht, 1884	2	+ 1	2	10
<i>A. (S.) dorsata</i> (Kirby, 1802)	14	+ 109	109	+ 154
<i>A. (S.) lepida</i> Schenck, 1861	–	+	–	–
<i>A. (S.) transitoria</i> Morawitz, 1871**	–	–	–	2
<i>A. (Taeniandrena) aberrans</i> Eversmann, 1852**	–	6	–	2
<i>A. (T.) afzeliella</i> (Kirby, 1802)	34	+ 13	+ 9	+ 94
<i>A. (T.) gelrae</i> van der Vecht, 1927	–	+	–	+
<i>A. (T.) intermedia</i> Thomson, 1870	–	+	–	–
<i>A. (T.) lathyri</i> Alfken, 1899	3	+ 1	–	–
<i>A. (T.) wilkella</i> (Kirby, 1802)	–	+	–	+

Table 1. (continuations)
Таблица 1. (продолжение)

Species name	Kursk Province	Lipetsk Province	Tambov Province	Voronezh Province
<i>A. (Tarsandrena) tarsata</i> Nylander, 1848	—	—	—	+
<i>A. (Trachandrena) haemorrhoea</i> (Fabricius, 1781)	30	+ 20	—	45
<i>A. (Truncandrena) truncatillabris</i> Morawitz, 1877	—	+ 2	1	+
<i>A. (Ulandrena) polita</i> Smith, 1847	36	+ 3	—	8
Number of species / specimens	41 / 358	75 / 704	19 / 242	67 / 912

Note. + indicates records in the literature (see Introduction); * — a new record for the regions as a whole, ** — a new record for the central European part of Russia, *** — new record for the European part of Russia. Species new to Russia are marked in bold.

Примечание. + литературные данные (см. Введение); * — новая находка для региона в целом, ** — новая находка для центра европейской части России, *** — новая находка для европейской части России. Новые для России виды отмечены жирным шрифтом.

A significant proportion of the specimens studied (1,410 out of 2,216, or around 64 %) were collected in various protected areas of the Central Chernozem Region (Table 2).

Further research in the European part of Russia will undoubtedly bring very interesting results, including other

Andrena species new to the fauna of Russia. In our opinion, the most significant efforts should be directed towards studying the fauna of protected areas of various categories.

The new records publishing here increase the *Andrena* fauna of Russia to 235 species.

Table 2. New records of *Andrena* species in protected areas of the Central Chernozem Region
Таблица 2. Новые данные о видах рода *Andrena* на особо охраняемых природных территориях Центрально-Черноземного региона

Species name	CC	DM	GG	KH	KS	VO	VZ
<i>Andrena aberrans</i>	—	2	6	—	—	—	—
<i>A. afzeliella</i>	4	57	13	11	1	8	—
<i>A. argentata</i>	—	—	2	3	—	27	—
<i>A. assimilis</i>	—	8	12	—	—	—	—
<i>A. atrata</i>	—	1	2	1	—	1	—
<i>A. batava</i>	—	2	—	—	—	—	—
<i>A. bicolor</i>	1	7	11	—	—	4	—
<i>A. bimaculata</i>	—	—	—	1	—	—	—
<i>A. chrysopyga</i>	1	3	13	—	—	—	—
<i>A. chrysosceles</i>	—	—	—	1	—	—	—
<i>A. cineraria</i>	—	6	5	—	1	—	—
<i>A. congruens</i>	—	—	1	1	—	2	—
<i>A. curvungula</i>	—	1	7	—	—	—	—
<i>A. denticulata</i>	2	—	1	—	—	—	—
<i>A. dorsata</i>	1	90	109	18	—	109	—
<i>A. fallax</i>	—	4	—	—	—	—	—
<i>A. falsifica</i>	—	4	19	—	—	—	—
<i>A. flavipes</i>	6	16	21	6	—	5	—
<i>A. florea</i>	1	—	—	—	—	—	—
<i>A. floricola</i>	—	3	121	—	—	—	—
<i>A. florivaga</i>	—	—	1	—	—	—	—
<i>A. fucata</i>	—	—	7	1	—	—	—
<i>A. fulvicornis</i>	1	—	—	—	—	—	—
<i>A. haemorrhoea</i>	14	6	20	1	—	—	—
<i>A. hattorfiana</i>	3	—	15	—	—	3	—
<i>A. helvola</i>	—	2	10	1	—	—	—
<i>A. humilis</i>	—	2	—	—	—	—	—
<i>A. labialis</i>	1	—	2	—	—	—	—
<i>A. labiata</i>	—	—	14	2	—	—	—
<i>A. lathyri</i>	2	—	1	—	—	—	—
<i>A. limata</i>	3	5	3	—	—	—	—
<i>A. marginata</i>	—	6	—	—	—	—	—

Table 2. (continuations)
Таблица 2. (продолжение)

Species name	CC	DM	GG	KH	KS	VO	VZ
<i>A. minutula</i>	5	4	109	10	—	54	—
<i>A. minutuloides</i>	9	14	33	3	—	6	—
<i>A. morio</i>	—	1	—	3	—	—	—
<i>A. nanaeformis</i>	2	7	33	—	—	—	—
<i>A. nanula</i>	—	1	—	—	—	—	—
<i>A. nitida</i>	3	4	9	—	—	—	—
<i>A. nitidiuscula</i>	1	—	1	—	—	1	—
<i>A. nycthemera</i>	—	—	5	—	—	—	—
<i>A. oralis</i>	—	1	—	1	—	—	—
<i>A. pallitarsis</i>	—	—	2	—	—	—	—
<i>A. paucisquama</i>	—	—	11	—	—	—	—
<i>A. pilipes</i>	—	4	6	1	—	—	—
<i>A. polita</i>	18	5	3	—	—	—	—
<i>A. praecox</i>	—	—	12	—	—	—	—
<i>A. proxima</i>	1	—	8	—	—	—	—
<i>A. rosae</i>	1	3	8	2	—	3	1
<i>A. rufizona</i>	—	—	3	—	—	—	—
<i>A. schencki</i>	1	—	—	—	—	—	—
<i>A. scotica</i>	1	4	6	5	—	—	—
<i>A. simillima</i>	—	—	10	—	—	—	—
<i>A. subopaca</i>	2	—	25	2	—	14	—
<i>A. thoracica</i>	3	3	9	—	—	1	—
<i>A. tibialis</i>	—	3	3	1	—	—	—
<i>A. transitoria</i>	—	1	—	1	—	—	—
<i>A. truncatilabris</i>	—	—	2	—	—	1	—
<i>A. vaga</i>	—	1	—	—	—	—	—
<i>A. variabilis</i>	—	3	—	—	—	—	—
<i>A. varians</i>	—	3	—	—	—	—	—
<i>A. ventralis</i>	—	—	4	—	—	—	—
Number of species / specimens	25 / 87	36 / 287	45 / 718	22 / 76	2 / 2	15 / 239	1 / 1

Note. CC — Central Chernozem State Nature Biosphere Reserve, DM — Divnogorye Museum Reserve, GG — Galichya Gora State Nature Reserve, KH — Khopersky State Nature Reserve, KS — Kamennaya Steppe State Nature Reserve, VO — Voroninsky State Nature Reserve, VZ — Voronezh State Nature Biosphere Reserve.

Примечание. ЦЧ — Центрально-Черноземный государственный природный биосферный заповедник, ДМ — Музей-заповедник Дивногорье, ГГ — Государственный природный заповедник «Галичья Гора», КХ — Хоперский государственный природный заповедник, КС — Государственный природный заповедник «Каменная степь», ВО — Государственный природный заповедник «Воронинский», ВЗ — Воронежский государственный природный биосферный заповедник.

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